City of Nashua

Central Purchasing
229 Main Street
Nashua NH 03060

March 3, 2015

Request for Proposals

RFP0931-031715
Water Quality Sampling and Analysis – Nashua Landfills

The Division of Public Works is seeking to engage a firm with substantial experience in analytical field and laboratory testing relative to closed landfills and groundwater management zones as regulated by the New Hampshire Department of Environmental Services (DES). The professional skills and services required to produce the required results consist of water quality sampling, analysis and reporting. Firms should demonstrate experience and expertise in environmental testing. These services shall be performed consistent with the following specifications at the City of Nashua's Four Hills Landfill; Lincoln Park Landfill; Roussel/Gardner Park Landfill; Old Nashua (Riverside) Landfill; and Shady Lane Landfill for a term of three (3) years, beginning July 1, 2015 and ending June 30, 2018.

Instructions to Participants

Proposals must be delivered, **in duplicate (one original and one copy)**, in sealed envelopes to the Central Purchasing Office, 229 Main Street, Lower Level, Nashua, NH 03060 before **3:00 pm** on **Tuesday, March 17, 2015.** Envelopes must be marked **"Water Quality Sampling and Analysis – Nashua Landfills".** Information on the scope of the proposal shall be submitted separately in two (2) envelopes marked: **Non-Fee Related Information** and **Fee Proposal**. Complete specifications are available on the City of Nashua web site, www.gonashua.com, under Citizen Favorites, Current Bids, document **RFP0931-031715.** Firms submitting proposals will be listed on the web site, under Bid Results, within three (3) hours after the bid opening (pricing will not be listed as the award is not price-driven).

The successful firm must provide proof of insurance coverage as required by the City of Nashua: Minimum insurance coverage is $1,000,000.00 General Liability per occurrence; $2,000,000.00 aggregate; $1,000,000 Automobile Liability Combined Single Limit; and proof of Worker's Compensation insurance in compliance with State Statutes. Liability certificates must name the City of Nashua as an additional insured.

The City of Nashua reserves the right to discontinue the selection process at any time. All contracts and awards are subject to funding approval. There will be no reimbursement to any candidate if selection is terminated.

The City may reject any or all of the bids on any basis and without disclosure of a reason. The failure to make such a disclosure shall not result in accrual of any right, claim or cause of action by any unsuccessful bidder against the City of Nashua. The City reserves the right to negotiate with the lowest responsible bidder for a lower bid price when the best interests of the City will be served. A sample contract is attached. All terms and conditions noted in Section 800 of the City of Nashua Purchasing Manual shall apply. Information is available on the Nashua web site.

All proposals must remain in effect for a minimum of ninety (90) days after bid opening.

Pursuant to NRO 5-71 (A), the City of Nashua supports the concept of purchasing products which are biodegradable, can be or have been recycled, or are environmentally sound. Due consideration will be given to the purchase of such products. If you are bidding on any such products which qualify, please so indicate in a cover sheet by item number and description.

Pursuant to NRO 5-78 (F), the purchasing manager shall not solicit a bid from a contractor who is in default on the payment of taxes, licenses or other monies due the City. Therefore, this bid request is void to anyone who is in default on said payments.

Questions or coordination of site visits relating to this request may be directed to Kerry Converse, Environmental Engineer, at 603-589-3420, conversek@nashuanh.gov .

Respectfully,

Mary Sanchez, CPPB

Mary Sanchez, CPPB
Purchasing Agent II
City of Nashua
sanchezm@nashuanh.gov

Background/History

The services requested in this solicitation are to be performed at the following City of Nashua landfill sites:

Four Hills Municipal Solid Waste Landfill
The Four Hills landfill is located at 840 West Hollis Street in Nashua, NH and covers approximately 263 acres. It contains a closed, 60-acre, unlined municipal solid waste (MSW) landfill, a closed, unlined 11-acre construction and demolition debris (C & D) landfill, and an operating 28-acre Phase I and II lined expansion landfill. A landfill gas to energy plant, recycling facility, and yard waste composting operation are also present on the site.

Sampling and analysis of ground water, surface water, and leachate at the Four Hills Landfill is conducted in accordance with Groundwater Management Permit (GMP) number GWP-840399-N-004 (revised February 19, 2014), DES landfill post-closure requirements, and the DES approved Operations Plan for the Phase I and Phase II expansion landfills. The current GMP expires April 4, 2016.

Lincoln Park Landfill
Lincoln Park landfill is located at the ends of Greenlay Street and Coliseum Avenue in Nashua. This closed landfill is utilized as a city park. Sampling and analysis of groundwater is to be conducted in accordance with the site's GMP number GWP-200203021-N-002. This permit expires on May 2, 2015.

Old Nashua (Riverside) Landfill
Old Nashua (Riverside) landfill is located off of Riverside Street in Nashua. A portion of this closed landfill is utilized as a parking lot, and is bordered by the Nashua Division of Public Works, Street Department facility, the Conway Ice Arena, Stellos Stadium, and the YMCA. Sampling and analysis of groundwater is to be conducted in accordance with the site's GMP number GWP-200009057-N-002. The permit expires October 17, 2015.

Roussel Park Landfill
Roussel Park landfill is located on Haines Street in Nashua. This closed landfill is utilized as a City park. Sampling and analysis of groundwater is to be conducted in accordance with GMP number GWP-2002020018-N-002 (revised March 13, 2014). This permit expires February 22, 2016.

Shady Lane Landfill
The Shady Lane landfill underlies a portion of Shady Lane, Kirkpatrick Park, and the New Searles School property. Groundwater sampling and analysis at this closed landfill is to be in accordance with GMP number GWP-198705083-N-004. This permit expires January 30, 2016.

General Scope of Services

The City of Nashua seeks to continue on-going testing at these landfill sites in accordance with their GMPs, landfill post-closure requirements, and landfill operating requirements. The successful firm will conduct the water quality testing outlined on the Scope of Services beginning on Page 6 of this solicitation.

The contract term will begin July 1, 2015 and end June 30, 2018. The sampling and analysis specifications are based on the current groundwater management permit requirements for each landfill site. However, these specifications are subject to change as the permits expire and are renewed by DES during the term of the contract.

Adjustments to the contract sum will be made annually as sampling and analysis specifications change. The City does not anticipate any significant changes to the permit requirements during the contract period.

The scope of services for each site shall include the following tasks:

1. Perform all necessary sampling and analytical testing outlined in the scope of services.

2. Become familiar with the sites subject to this RFP, including, but not limited to knowledge of well locations, leachate sample locations, and surface water locations.

3. Report results to the DES Groundwater Permits Coordinator and the City within 45 days of sample collection consistent with GMP reporting requirements and indicate where results exceed allowable regulatory limits.

4. When called upon, meet with the City to review data at no additional cost to the City. Additionally, perform re-sampling and analysis at no additional cost to the City in the event of field or laboratory contamination of samples or if questionable analysis results are reported.

5. Notify and coordinate all sampling events through the City designated contact person.

6. This scope does not include preparing annual or biennial summary reports to NHDES. The City will prepare and submit these reports separately.

Selection Criteria

The City reserves the exclusive right to select the individual(s) or firm that it deems to be in the best interest to accomplish the project as specified herein. The selection of the firm to accomplish this project will be based on the following criteria:

1. The firms understanding of the City's needs, the objectives and goals to be achieved and the work involved.

2. The quality and depth of the experience and expertise of the individual(s) who will do this work in providing similar successful assistance in other projects of this nature and the level of significant experience of the firm relative to testing. The firm shall include resumes of key personnel to be assigned to the project including the Project Manager and any proposed sub-consultants. The proposal should specify the particular company office from which the work will be performed.

3. Appropriateness of the project organization and individual team members. The identity, qualifications and competence of the individuals (including any sub-consultants, employees) who actually do and/or will be responsible for conducting the project, and the role of each in its completion.

4. Other relevant criteria.

5. Appropriateness of the firm's fee schedule, overall cost and the ability to perform the assigned tasks within the identified time frame.

Proposals must respond in writing to all requirements of this solicitation in the order of the items listed below.

A. Statement of Project Requirements
State in succinct terms the firms' understanding of what is required by this request for proposal.

B. Scope of Services
Describe in narrative form the firm's approach and plan for accomplishing the work listed herein.

C. Team
Provide names and complete curriculum vitae for all professional members of the firm's and sub-consultants (if any) team. Identify the team leader or project manager with ultimate responsibility for the work.

D. Similar Experience
Provide details of experience and past performance of the firm and members of its team on comparable work for government entities.

E. References
Provide the names, title and phone numbers of persons who can substantiate the firm's summary of its qualifications and experience relevant to this project.

F. Costs
The firm shall submit a cost summary to provide the services required to complete the annual water quality testing for each site. Pricing is to be submitted per site, and per round of testing with specific cost detail relative to each analysis required. **The Fee Proposal shall be submitted in a separately sealed envelope from the Non-Fee Related Information.**

The City reserves the right to select and award any or all of the tasks and/or laboratory analyses listed in the breakdown of testing requirements and may exercise this right at any time during the length of the contract.

All contracts are subject to review and approval by the City's Legal and Risk Management Departments, as well as the DES, if applicable.

Required insurances must be held at all times during the length of the project, with the City of Nashua named as an additional insured.

Other Requirements

The right is reserved to require interviews and presentations from some or all of the firms submitting proposals.

The right is reserved to reject any and all proposals, to waive any requirements of this Request for Proposal, request additional information to modify or amend with the consent of the firm any proposal, including but not limited to, team members, and to negotiate or effect the costs, fees, and/or terms of any agreement (contract) deemed by the City to be in its best interest.

Scope of Services
Four Hills Landfill
Water Quality Sampling and Analysis
RFP0931-031715

Requirements: Periodic testing and monitoring of groundwater, surface water, and leachate at the Four Hill Landfill per DES GMP GWP-840399-N-004 as revised February 19,2014 (expires April 4, 2016), post-closure requirements, and Phase I and II expansion landfill operations plan as summarized below.

Low flow sampling techniques will be employed to collect groundwater samples for analysis in order to achieve low turbidity levels in the samples. The sampling protocol is as follows:

Low flow sampling will be conducted consistent with USEPA document titled "Ground Water Issue", by Robert W. Puls and Michael J. Barcelona, dated April 1996; and USEPA document EQASOP-GW 001, Region 1, Low-Stress (Low Flow) SOP, Revision Number: 3, Dated July 30, 1996, Revised January 19, 2010.

In summary, the sample pump intake will be positioned in the approximate middle of the screened area of the well, and the well will be purged at a rate that minimizes drawdown. If the screened area is not known, the sample pump intake will be positioned approximately five feet from the bottom of the well. Water quality indicators to be monitored and documented during purging are pH, specific conductivity (SC), temperature, dissolved oxygen (DO), oxidation reduction potential (ORP), and turbidity. Samples will be collected for analysis when water quality indicators have stabilized. While RCRA protocols consider samples with turbidity levels >5 NTU turbid, USEPA indicates that this level may be too conservative depending on the aquifer and geological formation, particularly in clay or dense till, which exists on the site. Consistent with EQASOP-GW 001, water quality indicators will be considered stabilized when three consecutive readings recorded a minimum of three minutes apart or one flow-through-cell volume are within the following limits:

- Turbidity: within 10% variation for values greater than 5 NTU; if three values are less than 5 NTU, consider the values as stabilized
- Temperature: +/-0.2°C
- DO and ORP: 10% variation
- pH: +/- 0.2 unit

Low flow well purging will continue for a minimum of one hour regardless of when stabilization is achieved, unless turbidity values are less than 5 NTU. For the duration of the one-hour purging period, between stabilization of water quality parameters and sample collection, flow rates will be reduced to approximately 50 ml/min. If water quality indicators do not stabilize after one hour of purging, samples will be collected and the attempt to achieve stabilization will be documented.

DES protocol requires that overburden well samples are field filtered with 0.45-micron filters and analyzed for dissolved metals. Samples from bedrock wells are typically not filtered and are analyzed for total metals. Bedrock wells are denoted below with an "R" following the well identification, such as M-1R.

The City requires that the following testing and schedule be met. Frequency, degree, and type of testing may be revised at any time during the duration of this contract. **Expanded drinking water metals shall include Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Lead, Mercury, Nickel, Selenium, Silver, and Thallium.**

Monitoring Location	***Analysis***	***Frequency***
Groundwater Management Wells: M-1S, M-1R, M-2, M-5, M-7R M-8D, M-8S, M-9D, M-9S, M-9R M-10, M-11S, M-11M, M-11R Surface Water Sample Locations: Trestle Brook Upgradient (TBrook Up) Trestle Brook Downgradient (TBrook D)	Static Water Elevation in wells, Specific Conductance @ 25°C, pH, Temperature, Nitrate, Turbidity Sulfate, TKN, Chloride, Iron, and Manganese	April & November each year
Same as Above	NHDES-WMD Full List of Analytes For Volatile Organics including Low-level analysis for 1,4-Dioxane	November each year

Same as Above	Drinking Water Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag) plus antimony, Beryllium, nickel, and thallium	April each year
Groundwater Release Detection Wells: MW-101S & R, MW-102S & R, MW-103S & R, MW-104S & R, MW-105S & R, MW-106S & R, MW-107R, MW-108R, MW-109S & R, MW-111S & R	Static Water Elevation, Specific Conductance @ 25°C, pH, Temperature, Nitrate, Turbidity Sulfate, TKN, Chloride, Iron, Manganese, NHDES Full List of Analytes for Volatile Organics including low-level Analysis for 1,4-Dioxane	April and November each year
Same as Above	Drinking Water Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag) plus antimony, Beryllium, nickel, and thallium	April each year
Other Groundwater Monitoring Wells: B-2, B-3R, B-4, B-10R, B-13T, MW-110S & R	Static Water Elevation	April and November each year
Landfill Leachate: Primary, Secondary	Specific Conductance @ 25°C, PH, Temperature, Sulfate, Chloride, Iron, Manganese, COD, BOD, Sodium NHDES Full List of Analytes for Volatile Organics including low-level Analysis for 1,4-Dioxane, Drinking Water Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag) plus antimony, Beryllium, nickel, and thallium	April, July, and November each year

Scope of Services
Shady Lane Landfill
Water Quality Sampling and Analysis

Requirements: Periodic testing and monitoring of groundwater and surface water quality at the Shady Lane Landfill. Groundwater, surface water, and leachate seep testing shall be performed consistent with the requirements of the DES GMP GWP-198705083-N-004 (expires January 30, 2016). Groundwater samples should be obtained using sampling procedures and protocol described in "Practical Guide to Ground-water Sampling" USEPA current edition and "RCRA Ground-water Monitoring: Draft Technical Guidance" USEPA current edition. Low flow sampling techniques are not required for this site. A laboratory certified by the USEPA or the New Hampshire DES shall analyze samples. Sample analysis and reporting shall be in accordance with EPA approved methods and method detection limits shall be below applicable regulatory standards. All overburden groundwater samples shall be collected for dissolved metals analyses. These samples shall be field filtered (with a 0.45-micron filter) and acidified at the time of collection. Surface water samples and samples collected from bedrock or water supply wells shall be analyzed for total metals, and shall not be filtered. Duplicate samples shall be collected from leachate seeps LS-5 and LS-6 for analysis for both total and dissolved metals. Surface water samples from the Salmon Brook are denoted SWU (upstream of the landfill) and SWD (downstream of the landfill). The surface water and leachate sampling locations are marked at the site with black iron rods.

The City requires the following testing and schedule to be met. Frequency and degree of testing may be revised at any time during the duration of this contract.

Monitoring Location	***Analysis***	***Frequency***
Groundwater Management Wells: MW-1B, MW-3, MW-4 Leachate Seeps: LS5, LS6 Surface Water Samples: SWU, SWD	Water Level Elevation (wells), Specific Conductance @ 25°C, pH, Chloride, Iron, Manganese, COD	April and November each year
Same as Above	NHDES-WMD Full List of Analytes For Volatile Organics including Low-level analysis for 1,4-Dioxane Drinking Water Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag)	November 2016

Scope of Services
Lincoln Park Landfill and Old Nashua (Riverside) Landfill
Water Quality Sampling and Analysis

Requirements: Periodic testing and monitoring of groundwater and surface water quality at Lincoln Park landfill and Old Nashua landfill. Groundwater testing shall be performed consistent with the requirements of DES GMPs GWP-200203021-N-002 (Lincoln Park – expires May 2, 2015) and GWP-200009057-N-002 (Old Nashua – expires October 17, 2015) as summarized below. Groundwater samples should be obtained using sampling procedures and protocol described in "Practical Guide to Ground-water Sampling" USEPA current edition and "RCRA Ground-water Monitoring: Draft Technical Guidance" USEPA current edition. Low flow sampling techniques are not required for these sites. A laboratory certified by the USEPA or the New Hampshire DES shall analyze samples. Sample analysis and reporting shall be in accordance with EPA approved methods and method detection limits shall be below applicable regulatory standards. All overburden groundwater samples shall be collected for dissolved metals analyses. These samples shall be field filtered (with a 0.45-micron filter) and acidified at the time of collection. Surface water samples and samples collected from bedrock or water supply wells shall be analyzed for total metals, and shall not be filtered.

The City requires the following testing and schedule to be met. Frequency and degree of testing may be revised at any time during the duration of this contract.

Lincoln Park Landfill

Monitoring Location	***Analysis***	***Frequency***
Groundwater Management Wells: MW-1, MW-2, MW-3, MW-4, MW-5 & MW-6	Water Level Elevation, Specific Conductance @ 25°C, pH, Chloride, Nitrate, TKN, Iron, Manganese	April and October each year
Same as Above:	NHDES Petroleum & Hazardous Waste Remediation Full List of Analytes for Volatile Organics including low-level analysis for 1,4-Dioxane, Drinking Water Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag)	October 2015 & 2017

Old Nashua (Riverside Landfill)

Monitoring Location	***Analysis***	***Frequency***
Groundwater Management Wells: MW-3, MW-4, MW-5 & MW-6	Water Level Elevation, Specific Conductance @ 25°C, pH, Chloride, Nitrate, TKN, Iron, Manganese	April and October each year
Same as Above:	NHDES Petroleum & Hazardous Waste Remediation Full List of Analytes for Volatile Organics including low-level Analysis for 1,4-Dioxane and Ethylene Dibromide (EDB), Drinking Water Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag)	October 2015 & 2017

Scope of Services
Roussel Park Landfill
Water Quality Sampling and Analysis

Requirements: Periodic testing and monitoring of groundwater at the Roussel Park Landfill per DES GMP GWP-200202018-N-002, revised March 13, 2014 (expires February 22, 2016). Groundwater sampling and analysis requirements are summarized below.

Low flow sampling techniques will be employed to collect bedrock groundwater samples for analysis in order to achieve low turbidity levels in the samples. Low flow sampling techniques are not required for overburden monitoring wells. The low flow sampling protocol is as follows:

Low flow sampling will be conducted consistent with USEPA document titled "Ground Water Issue", by Robert W. Puls and Michael J. Barcelona, dated April 1996; and USEPA document EQASOP-GW 001, Region 1, Low-Stress (Low Flow) SOP, Revision Number: 3, Dated July 30, 1996, Revised January 19, 2010.

In summary, the sample pump intake will be positioned in the approximate middle of the screened area of the well, and the well will be purged at a rate that minimizes drawdown. If the screened area is not known, the sample pump intake will be positioned approximately five feet from the bottom of the well. Water quality indicators to be monitored and documented during purging are pH, specific conductivity (SC), temperature, dissolved oxygen (DO), oxidation reduction potential (ORP), and turbidity. Samples will be collected for analysis when water quality indicators have stabilized. While RCRA protocols consider samples with turbidity levels >5 NTU turbid, USEPA indicates that this level may be too conservative depending on the aquifer and geological formation. Consistent with EQASOP-GW 001, water quality indicators will be considered stabilized when three consecutive readings recorded a minimum of three minutes apart or one flow-through-cell volume are within the following limits:

- Turbidity: within 10% variation for values greater than 5 NTU; if three values are less than 5 NTU, consider the values as stabilized
- DO and ORP: 10% variation
- Temperature: +/- 0.2°C
- pH: +/- 0.2 units

As previously approved by DES, the low-flow sampling protocol for this site requires that a higher purge rate of 300 – 400 ml/min be used for the initial approximate one-hour purging period, and then reduced to no greater than 100 ml/min pump rate as needed to achieve final parameter stabilization (with a maximum total purge duration of two hours). If water quality indicators do not stabilize after two hours of purging, samples will be collected and the attempt to achieve stabilization will be documented.

DES protocol requires that overburden well samples are field filtered with 0.45-micron filters and analyzed for dissolved metals. Samples from bedrock wells are typically not filtered and are analyzed for total metals.

The City requires that the following testing and schedule be met.

Groundwater Management Wells: MW-1, MW-2, MW-3, MW-4, MW-5 & MW-6	Water Level Elevation, Specific Conductance @ 25°C, pH, Chloride, Nitrate, TKN, Arsenic, Iron & Manganese	October each year
Same as Above:	NHDES Petroleum & Hazardous Waste Remediation Full List of Analytes for Volatile Organics including low-level analysis for 1,4-Dioxane, Drinking Water Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag)	October 2015 & 2017